Reviewing Virginia's Water Quality Standards

An Overview of Proposed Changes

The Clean Water Act requires that states review their water quality standards every three years to ensure that they meet public concerns, reflect new scientific and technical information, and follow guidelines developed by the U.S. Environmental Protection Agency.

Water quality standards define the goals for healthy waters by designating their uses, setting water quality conditions that will protect those uses and establishing provisions to safeguard high quality waters. They protect water quality so rivers, lakes and other water bodies can be sources of water supplies; support agricultural, industrial and recreational activities among others; promote the growth of fish and shellfish that are suitable for eating; and protect aquatic life.

The water quality standards are the cornerstone for all other water quality programs at the Virginia Department of Environmental Quality. For example, these standards are used to set pollution limits in discharge permits and evaluate the health of waters statewide.

The State Water Control Board initiated the latest triennial review process in late 2006. DEQ provides staff assistance to the board. The agency has reviewed the standards, addressed public comments and consulted with a citizen advisory group that includes representatives from the public, industries and environmental organizations. DEQ recently proposed changes to the standards based on this work at the direction of the water board.

Numerous changes to the water quality standards are being considered and are available for public comment. These include the following proposals:

- Updating the chemical and bacteria standards for natural waters.
- Adding information to recognize that water in swamps or marshes is naturally low in dissolved oxygen and pH.

The proposed changes also include deletions of sections that are unused or no longer needed and miscellaneous updates and clarifications.

How to comment

Anyone wishing to submit written comments may do so between March 31 and May 30 by mail, email or fax. Please send comments to

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Written comments (including emails) must include the name and address of the person commenting. In order to be considered, comments must be received by the last date of the public comment period.

Three public hearings will be held during the public comment period:

- May 1 at 7 p.m. in Roanoke
  at the DEQ West Central Regional Office
- May 2 at 10 a.m. in Glen Allen
  at the DEQ Piedmont Regional Office
- May 8 at 7 p.m. in Virginia Beach
  at the DEQ Tidewater Regional Office

A question and answer period will be held 30 minutes prior to the beginning of the public hearing at each location. Oral and written comments may be submitted at that time. After comments have been considered, the board will make the final decision on the regulation.

In addition to any other comments, the State Water Control Board is seeking comments on the costs and benefits of the proposal, and effects on small businesses.

Bacteria levels in recreational waters

Some waters do not meet water quality standards and are considered impaired. DEQ, other state agencies, localities and landowners work together to improve water quality by developing and implementing cleanup plans.

To meet the current water quality standards for bacteria in fresh waters, some communities and landowners would need to eliminate all sources of bacteria, including natural sources such as wildlife, in their watershed. This makes some cleanups unachievable.

To focus funding and efforts on cleaning up bacteria caused by people, such as leaking septic tanks, DEQ proposed that the State Water Control Board reconsider the bacteria standard.

The board is seeking public comment on two options for bacteria in freshwaters. Only one value will be adopted into the final regulation. The board will consider comments from the public before making a final decision. The first value is 126 colony-forming units per 100 milliliters of water, which is the existing standard in freshwaters. The second value is 206 colony-forming units. Either one provides greater protection than the existing standard for marine beach waters.

More information about DEQ is available online *www.deq.virginia.gov*

Though the higher number is less stringent, EPA has determined that it does protect public health as citizens use the freshwater rivers and lakes in the Commonwealth. This option is being evaluated because it would continue to protect public health and also would enable localities and landowners to direct their cleanup funds and efforts to waters where pollution related to human activity is a more significant concern.

Recent information from the EPA indicates that a change in the bacteria standard would allow higher bacteria limits in discharge permits for wastewater treatment plants. While DEQ had originally not taken a position on the options, it never intended that higher discharge limits would result. DEQ will share this concern with the water board when it next considers the proposed changes to the water quality standards.

Chemicals in natural waters

DEQ has recalculated the safe levels in natural waters for 93 chemicals, referred to as toxic contaminants. The agency is proposing to include these revisions as part of the water quality standards. This update is based on better scientific information to protect water quality and human health. Incorporating this new information would result in standards that are 60 percent to 80 percent more stringent than current ones.

DEQ also is proposing a new fish tissue standard for methylmercury. Mercury is a naturally occurring metal that is released from some manufacturing and industrial activities, either directly to natural waters or by air emissions that eventually deposit into natural waters. Once mercury enters streams, rivers, lakes or wetlands, natural biological processes can convert it into a toxin called methylmercury. It accumulates in the fatty tissue of fish. Eating contaminated fish is the primary way people are exposed to mercury. EPA determined the best way to protect designated water uses was to develop a limit for the amount of mercury in fish tissue instead of in the water.

Swamp waters

Virginia has some unique aquatic ecosystems in eastern and southeastern Virginia that are naturally low in dissolved oxygen and pH, and the aquatic plants and animals have adapted to these conditions. While the regulation includes a separate classification for swamp waters, many waters have been listed as not meeting the standards. This is because the decisions were made before specific information was available about the natural conditions of these waters.

To address this concern, Virginia is proposing the addition of a description that recognizes the natural fluctuations in the quality of these waters, rather than to develop specific standards that describe natural conditions for each swamp in the Commonwealth. This approach is supported by the Virginia Department of Game and Inland Fisheries and the U.S. Fish and Wildlife Service.